

METEOROLOGY, B.A.

Meteorology is more than just the study of weather; it includes all the characteristics, structures and processes of the atmosphere. Basic principles of physics and chemistry are applied to discover what makes the atmosphere work. Mathematical equations and techniques are used to predict weather based on present conditions. Recently, meteorology has become increasingly vital to humankind's concerns. Ozone depletion and global warming have been identified as threats to human existence on earth. Meteorologists are on the front lines of the battle to learn more about and model these phenomena.

Curriculum Overview

The meteorology curriculum at Saint Louis University emphasizes both theory and practical application in fundamental and innovative aspects of the atmospheric sciences. Since class sizes are relatively small, an effective relationship develops between the student and the instructor. This personalized teaching mode stimulates academic interest and professional dedication among students. This is further strengthened by the Jesuit tradition of education.

Fieldwork and Research Opportunities

Students in the meteorology program at Saint Louis University can take advantage of the National Weather Service (NWS) Forecast Office, which is located near the University and regularly accepts SLU students for internships. Classes often take field trips to the office to experience NWS operations. There are four commercial TV stations in the St. Louis area that regularly feature weather reports. Internships are also available with these stations. Students can earn six credits through an internship.

Research centers include the Earthquake Center, the Cooperative Institute for Precipitation Systems, the Global Geodynamics Program, the Center for Environmental Sciences and Quantum Weather™.

Careers

The Bachelor of Arts program emphasizes the integration of studies in meteorology with other disciplines, such as communication and computer sciences.

Graduates are employed with private meteorology firms, the National Weather service, television stations, and as University faculty.

Admission Requirements

Freshman

Begin your application for this program at www.slu.edu/apply. Saint Louis University also accepts the Common App.

All applications are thoroughly reviewed with the highest degree of individual care and consideration to all credentials that are submitted. Solid academic performance in college preparatory course work is a primary concern in reviewing a freshman applicant's file. College admission test scores (ACT or SAT) are used as an additional indicator of the student's ability to meet the academic rigors of Saint Louis University and are used as qualifiers for certain University scholarship programs. To be considered for admission to any Saint Louis University undergraduate program, the applicant must be graduating from an accredited high school or have an acceptable score on the General Education Development (GED) test.

Begin Your Application (<http://www.slu.edu/apply.php>)

Transfer

Begin your application for this program at www.slu.edu/apply.

Applicants must be a graduate of an accredited high school or have an acceptable score on the GED. An official high school transcript and official test scores are required only of those students who have attempted fewer than 24 transferable semester credits (or 30 quarter credits) of college credit. Those having completed 24 or more of college credit need only submit a transcript from previously attended college(s). In reviewing a transfer applicant's file, the office of admission holistically examines the student's academic performance in college-level coursework as an indicator of the student's ability to meet the academic rigors of Saint Louis University.

International Applicants

Begin your application for this program at www.slu.edu/apply.

All admission policies and requirements for domestic students apply to international students along with the following:

- Demonstrate English Language Proficiency (<http://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency>)
- Proof of financial support must include:
 - A letter of financial support from the person(s) or sponsoring agency funding the time at Saint Louis University
 - A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of study at the University
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include the courses taken and/or lectures attended, practical laboratory work, the maximum and minimum grades attainable, the grades earned or the results of all end-of-term examinations, and any honors or degrees received. WES and ECE transcripts are accepted.

Scholarships and Financial Aid

There are two principal ways to help finance a Saint Louis University education:

- Scholarships: awarded based on academic achievement, service, leadership and financial need.
- Financial Aid: provided in the form of grants and loans, some of which require repayment.

For priority consideration for merit-based scholarships, applicants should apply for admission by Dec. 1 and complete a Free Application for Federal Student Aid (FAFSA) by March 1.

For information on other scholarships and financial aid, visit the student financial services office online at <https://finaid.slu.edu>.

Learning Outcomes

1. Graduates will know the founding principles in their field of study as well as the facts and content appropriate to the field.
2. Graduates will be able to use their knowledge to reason about issues in their discipline.
3. Graduates will be able to solve quantitative problems in their discipline.

Requirements

Meteorology students must complete a minimum total of **59 credit hours** for the major.

Code	Title	Credits
Core Requirement		
College core requirements (p. 2)		57-66
For additional information about core courses (http://catalog.slu.edu/colleges-schools/arts-sciences/#policiestext)		
Required Courses		
EAS 1420	Foundations of Atmospheric Science	3
EAS 2110	Meteorological Analysis	3
EAS 2170	Geographic Information System in Civil Engineering	3
EAS 2440	Atmospheric Processes and Systems	3
EAS 2530	Fundamentals of Climate Systems	3
EAS 3330	Physical Meteorology I	3
EAS 4150	Instrumentation and Remote Sensing	3
EAS 4200	Synoptic Meteorology I	3
EAS 4220	Synoptic Meteorology II	3
EAS 4440	Principles of Dynamic Meteorology I	3
PHYS 1310 & PHYS 1320	Physics I and Physics I Laboratory	4
PHYS 1330 & PHYS 1340	Physics II and Physics II Laboratory	4
MATH 1510	Calculus I	4
MATH 1520	Calculus II	4
MATH 2530	Calculus III	4
Computer Science Requirement		
CSCI 1060	Introduction to Computer Science: Scientific Programming	3
or CSCI 1300	Introduction to Object-Oriented Programming	
Major Elective Courses		
Select nine credits of the following:		9
EAS 1050	Introduction to Oceanography	
EAS 3150	Broadcast Meteorology I	
EAS 3160	Broadcast Meteorology II	
EAS 3250	Global Change	
EAS 3340	Physical Meteorology II	
EAS 3500	Numerical Modeling Applications	
EAS 3700	Mesoanalysis and Severe Storms	
EAS 3900	SLU TV Practicum	
EAS 4030	Elements of Air Pollution	
EAS 4230	Micrometeorology	
EAS 4450	Principles of Dynamic Meteorology II	
EAS 4410	Hydrology	
EAS 4470	Elementary Tropical Meteorology	
EAS 4500	Scientific Communications	
EAS 4650	Weather Forecasting	
EAS 4680	Mesoscale Meteorology	
EAS 4780	COMET Modules	
EAS 4910	Internship	
EAS 4880	Senior Inquiry Research Project	

CHEM 1110 General Chemistry 1

GIS 4010 Introduction to GIS

General Electives

0-1

Total Credits

120-128

Continuation Standards

Students must have a minimum of a 2.00 GPA in their major courses (EAS) and required related credits (Biology, Chemistry, Mathematics and Computer Sciences, Physics, etc.) by the conclusion of their freshman year. Students that fall below a 2.00 GPA will be placed on probation. If a student fails to obtain at least a 2.0 GPA in their major courses and required related credits by the conclusion of their sophomore year they will not be allowed to continue in the program.

Bachelor of Arts Core Curriculum Requirements

Code	Title	Credits
Core Components and Credits		
Foundations of Discourse (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/foundations-discourse)		3
Diversity in the U.S. (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/cultural-diversity)		3
Global Citizenship (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/global-citizenship)		3
Foreign Language (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/foreign-language)		0-9
Fine Arts (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/fine-arts)		3
Literature (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/literature)		6
Mathematics (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/mathematics)		3
Natural Science (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/sciences)		6
Philosophy (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/philosophy)		9
Social Science (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/social-science)		6
Theology (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/theology)		9
World History (http://catalog.slu.edu/colleges-schools/arts-sciences/ba-core/world-history)		6
Total Credits		57-66

Graduation Requirements

- Complete a minimum of 120 credits (excluding pre-college level courses [numbered below 1000]).
- Complete either the College of Arts and Sciences Bachelor of Arts or Bachelor of Science Core Curriculum Requirements
- Complete Major Requirements: minimum 30 credits required.
- Complete remaining credits with a second major, minor, certificate, and/or elective credits to reach the minimum of 120 credits required for graduation.
- Courses listed under the intensive English program do not count toward graduation requirements. EAP 1500 College Composition for International Students (3 cr), EAP 1900 Rhetoric & Research Strategies (3 cr) and EAP 2850 Nation, Identity and Literature (3 cr) count toward graduation requirements as equivalents to Department

of English courses. In addition to those courses, six credits from EAP/MLNG courses at the 1000 level or higher may count toward graduation requirements

- Achieve at least a 2.00 cumulative grade point average, a 2.00 grade point average in the major(s) and a 2.00 grade point average in the minor/certificate, or related elective credits.
- Complete Dept/Program specific academic and performance requirements.
- Complete at least 50% of the coursework for the major and 75% for the minor/certificate through Saint Louis University or an approved study abroad program.
- Complete 30 of the final 36 credits through Saint Louis University or an approved study abroad program.
- Complete an online degree application by the required University deadline.

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
Year One		
Fall		
EAS 1420	Foundations of Atmospheric Science	3
MATH 1400	Pre-Calculus	3
A&S Core		3
A&S Core		3
A&S Core		3
Credits		15
Spring		
EAS 2530	Fundamentals of Climate Systems	3
MATH 1510	Calculus I	4
CHEM 1110	General Chemistry I	3
A&S Core		3
A&S Core		3
Credits		16
Year Two		
Fall		
EAS 2110	Meteorological Analysis	3
EAS 2440	Atmospheric Processes and Systems	3
MATH 1520	Calculus II	4
PHYS 1310 & PHYS 1320	Physics I and Physics I Laboratory	4
A&S Core		3
Credits		17
Spring		
EAS 3330	Physical Meteorology I	3

MATH 2530	Calculus III	4
PHYS 1330 & PHYS 1340	Physics II and Physics II Laboratory	4
CSCI 1060	Introduction to Computer Science: Scientific Programming	3
A&S Core		3
Credits		17
Year Three		
Fall		
EAS 4150	Instrumentation and Remote Sensing	3
Meteorology elective		3
A&S Core		3
A&S Core		3
A&S Core		3
Credits		15
Spring		
EAS 4200	Synoptic Meteorology I	3
EAS 4440	Principles of Dynamic Meteorology I	3
Meteorology Elective		3
Math Elective		3
A&S Core		3
Credits		15
Year Four		
Fall		
EAS 4220	Synoptic Meteorology II	3
Meteorology elective		3
A&S Core		3
A&S Core		3
A&S Core		3
Credits		15
Spring		
Meteorology elective		3
A&S Core		3
A&S Core		3
A&S Core		3
Elective		3
Credits		15
Total Credits		125